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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ROBERT D. HORNING

Appeal 2007-2395
Application 10/673,453
Technology Center 2800

Decided: April 10, 2008

Before JOSEPH L. DIXON, LANCE LEONARD BARRY, and
HOWARD B. BLANKENSHIP, *Administrative Patent Judges*.

DIXON, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the Examiner's final rejection of 1-15 and 22-26. Claims 16-21 have been withdrawn from consideration. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

BACKGROUND

Appellant's invention relates to a polymer actuator having a circular unit cell. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below.

1. A microactuator device, comprising:

at least a pair of polymeric sheets each having conductive and dielectric films deposited thereon, the polymeric sheets facing each other and bonded together to create at least one cell having a substantially circular shape parallel to a plane in which the polymeric sheets lie, the at least one cell having at least one egress hole to allow a fluid to pass there through when a source of electric potential is applied to the conductive films to cause a portion of the polymeric sheets in the vicinity of a perimeter of the cell to be attracted to one another and thereby cause the cell to retract.

PRIOR ART

The prior art references of record relied upon by the Examiner in rejecting the appealed claims are:

Ohnstein	US 5,180,623	Jan. 19, 1993
Scheurenbrand	US 6,182,941 B1	Feb. 6, 2001
Horning	US 2002/0125790 A1	Sep. 12, 2002

REJECTIONS

Claims 1-15, 22, and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Horning and Ohnstein. Claims 24-26 stand rejected

under 35 U.S.C. § 103(a) as being unpatentable over Horning and Ohnstein in view of Scheurenbrand.

Rather than reiterate the conflicting viewpoints advanced by the Examiner and Appellant regarding the above-noted rejection, we make reference to the Examiner's Answer (mailed April 18, 2007) for the reasoning in support of the rejections, and to Appellant's Brief (filed April 20, 2006) and Reply Brief (filed April 9, 2007) for the arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to Appellant's Specification and claims, to the applied prior art references, and to the respective positions articulated by Appellant and the Examiner. As a consequence of our review, we make the determinations that follow.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). “[T]he Examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability.” *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). Furthermore, “there must be some articulated reasoning with some rational underpinning to support the legal conclusion of

obviousness' . . . [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court

can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007)(quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). "[W]hen a patent 'simply arranges old elements with each performing the same function it had been known to perform' and yields no more than one would expect from such an arrangement, the combination is obvious." *KSR Int'l v. Teleflex Inc.*, 127 S. Ct. 1727, 1739 (2007) (quoting *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 282 (1976)). More specifically, "when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result." *Id.* at 1740 (2007) (citing *United States v. Adams*, 383 U.S. 39, 50-51 (1966)).

Appellant's contention is that the Examiner has failed to establish a prima facie case of obviousness. Appellant contends that the Examiner has not set forth a clear articulation of a motivation for combining the elements in different prior art references. Specifically, Appellant contends that there is no articulation at all as to why one of ordinary skill in the art would have been motivated to change the configuration of the linear polymer cells of Horning to circular polymer cells in light of the teachings of Ohnstein (Br. 9). Here, we find Appellant's argument to be a rather narrow and a literal interpretation of only the express teachings of Ohnstein and Horning. While

we agree with Appellant's argument that neither Horning or Ohnstein individually teach or suggest the totality of the instant claimed invention, it is the combined teachings of Horning and Ohnstein in light of what would have been readily apparent to those skilled in the art at the time of the invention which the Examiner has relied upon in the rejection. (Ans. 4-6).

At page 6 of the Answer, the Examiner has clearly identified the teachings of Ohnstein with respect to figures 6a and 7a which teach two similar square and circular embodiments of the microvalve. Here, the Examiner maintains that Ohnstein teaches the equivalence of the valve being square or circular and that those skilled in the art would have known to choose between those equivalent structures or orientations in shape, size, and arrangement.

Appellant argues that Ohnstein does not state that the circular shape of the closure plate specifically allows the device of Ohnstein to operate as a semi-conductor electrostatic valve and only operates similarly to a closure plate with another's shape. Appellant asserts that Ohnstein offers no explanation as to why a closure plate with a circular shape offers advantages over or operates differently from a closure plate with a different shape. Appellant argues that since Ohnstein offers no explanation as to why a circular-closure plate all shape offers advantages over or operates differently from any other closure plate shape, and the Examiner has pointed to no other objective evidence in either reference, the Examiner has failed to provide a sufficient motivation to combine the teachings. (Reply Br. 3-4). We cannot agree with Appellant's broad sweeping argument/conclusion. Here, the

Examiner has found these “similar” embodiments to be equivalents. We do not find that Appellant has shown that the combination does more than yield a predictable result when a structure already known in the prior art is altered by the mere substitution of one shape for another known in the field.

We find the teachings of Ohnstein to clearly teach and fairly suggest the use of the disclosed shapes including rectangular, square, or circular. Therefore, we find that Ohnstein provides at least a general motivation to those skilled in the art to implement the microvalve or micro-actuator in various shapes. Here, we find no limitations in the language of independent claim 1 which would require the more specific level of teachings, suggestion or motivation as Appellant contends. We find Appellant's argument concerning the need for disclosure of recited shape related advantages or operational differentiation between shapes to go beyond the express scope of independent claim 1. We find that independent claim 1 which merely recites a micro-actuator device reciting the structural relationship only of the parts of the device. Here, we find that Ohnstein does provide an express teaching and suggestion of the use of various shapes in the closure plate for various applications of the device. While Ohnstein does not go into great depth into the various embodiments, we find that those skilled in the relevant art would have been motivated to implement the various shapes for alternative applications. Therefore, we do not find Appellant's argument to be persuasive of error in the Examiner's prima facie case, and we will sustain the rejection of independent claims 1, 7, and 12 and dependent claims 2-6, 8-11, 13-15, and 22-23.

With respect to dependent claims 24-26, Appellant argues that Scheurenbrand does not overcome any of the deficiencies associated with the above combination. Since we did not find Appellant's argument above to be persuasive, we similarly do not find the same argument persuasive with respect to dependent claims 24-26, and we will sustain the rejection of dependent claims 24-26.

CONCLUSION

To summarize, we have sustained the rejection of claims 1-15 and 22-26 under 35 U.S.C. § 103(a).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

Appeal 2007-2395
Application 10/673,453

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